

Reducing Heterosexuals' Prejudice Toward Gay Men and Lesbian Women via an Induced Cross-Orientation Friendship

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There is limited correlational research on whether cross-orientation friendships reduce heterosexuals' sexual prejudice, and no existing experimental studies on the impact of simulated cross-orientation friendships on attitudes toward gay men and lesbian women. The current study involved a novel and experimental examination of whether simulated cross-orientation friendships would reduce sexual prejudice. College student participants (White heterosexual) completed an experimental-manipulated closeness exercise (the fast friends procedure; Aron, Melinat, Aron, Vallone, & Bator, 1997) with a confederate (matched to participants' gender). Participants were randomly assigned to undergo the fast friends procedure with a confederate who either did not reveal his or her sexual orientation (control condition) or revealed being gay or lesbian at the beginning (reveal-beginning condition) or end of the interaction (reveal-end condition). As predicted, participants in both experimental conditions relative to those in a control condition reported significantly improved attitudes toward gay men and lesbian women (pre- to postexperiment), greater feelings of interpersonal closeness, and more positive behavior (longer and friendlier responses following disclosure of sexual orientation). The experimental conditions did not differ from each other. Implications of these findings are discussed.

Keywords: contact, cross-orientation friendships, disclosure, sexual orientation, sexual prejudice

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Imagine that Steve and Mike are assigned to be lab partners in a class. During their friendship, Mike discloses to Steve that he is gay. As a result of their friendship, Steve develops improved attitudes toward gay men and lesbian women. An extensive body of research increasingly points to intergroup contact in the form of friendship as a particularly effective means for reducing ethnic, racial, religious and sexual prejudice (Davies, Tropp, Aron, Pettigrew, & Wright, 2011; Hewstone, Cairns, Voci, Hamberger, & Niens, 2006; Levin, van Laar, & Sidanius, 2003; Page-Gould, Mendoza-Denton, & Tropp, 2008; Paolini, Hewstone, Cairns, & Voci, 2004; Pettigrew, 1998; Pettigrew & Tropp, 2006; Turner, Hewstone, Voci, Paolini, & Christ, 2007; Turner & Feddes, 2011; Vonofakou, Hewstone, & Voci, 2007).

The frequency of cross-orientation (involving different sexual orientations) friendships is steadily increasing. Personally knowing someone who is gay or lesbian increased nearly 30% in 20 years, from 61% in 1993% to 87% in 2013 (Pew Research Center, 2013). Among the same sample, 49% of respondents report having a close family member or friend who is gay or lesbian (Pew Research Center, 2013). Still, gay men and lesbian women are at risk for interpersonal violence (e.g., Herek, 2009), stigma (e.g.,

Herek, 2009; Herek, Gillis, & Cogan, 2009), negative attitudes (Herek, 2010; Kite & Whitley, 1996), and housing and employment discrimination (e.g., Herek, 2009). Thus, it is important to understand ways to reduce sexual prejudice such as by fostering cross-orientation friendships.

The growing prevalence of cross-orientation friendships could suggest increased possibilities for positive consequences such as intergroup friendships. Intergroup contact in the form of friendship is related to less sexual prejudice; however, it is an understudied topic within the intergroup contact literature (e.g., Davies et al., 2011; Pettigrew & Tropp, 2006; Smith, Axelton, & Saucier, 2009). In Pettigrew and Tropp's (2006) meta-analysis of intergroup contact, including friendship, which included 515 studies, 362 studies concerned race/ethnicity and only 31 studies (42 samples) concerned sexual orientation; yet, the largest effects of reduced prejudice came from studies of contact between heterosexuals and gay men and lesbian women (also see meta-analysis by Smith et al., 2009). Within the cross-orientation literature, few studies have examined friendships between heterosexuals and gay men and lesbian women, and those studies tend to be correlational and do not explore potentially important intervening variables such as the timing of the sexual orientation disclosure. The current investigation aims to address these gaps with the use of a closeness-generating exercise known as the "fast-friends" procedure (Aron, Melinat, Aron, Vallone, & Bator, 1997). Heterosexual undergraduates underwent the fast friends procedure with confederates who either disclosed their sexual orientation at the beginning or toward the end of an interaction or did not disclose their sexual orientation (control condition) to examine how a simulated friendship impacts attitudes toward gay men and lesbian women.

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Cross-Orientation Contact and Sexual Prejudice

As noted, the current investigation builds on the strong theoretical foundation of intergroup contact theory (e.g., Allport, 1954; Pettigrew, 1998), in which subsequent empirical research, mostly concerning interracial contact, revealed that intergroup friendships are a promising avenue for reducing prejudice (e.g., Davies et al., 2011; Pettigrew & Tropp, 2006; Smith et al., 2009). Within the relatively small literature on cross-orientation relationships, most of the research has been correlational (for exceptions, see Ellis & Vasseur, 1993; Grack & Richman, 1996; Lance, 1987; Pagtolun-an & Clair, 1986), and most studies assess *contact* broadly rather than friendship specifically. Below, we review the relevant literature to the present investigation: correlational studies of cross-orientation *contact*, experimental studies of cross-orientation *contact*, and finally, the few studies of cross-orientation *friendships*, which are correlational.

There are some correlational studies showing that greater cross-orientation *contact* (often grouping together multiple types of contact such as acquaintances, coworkers, family members, friends) relates to more positive attitudes toward gay men and lesbian women (Basow & Johnson, 2000; Berkman & Zinberg, 1997; Bowen & Bourgeois, 2001; Cotten-Huston & Waite, 1999; Gentry, 1987; Glassner & Owen, 1976; Herek & Capitanio, 1996; Herek & Glunt, 1993; Horvath & Ryan, 2003; Liang & Alimo, 2005; Roper & Halloran, 2007). For example, Glassner and Owen (1976) found that the number of "homosexual" acquaintances in college was positively related to a preference for less social distance to "homosexuals" among undergraduate students. Likewise, Gentry (1987) found that those participants who had a gay or lesbian friend or acquaintance reported greater social comfort around "homosexuals." Furthermore, undergraduate students who reported one or two openly gay, lesbian, or bisexual individuals living in the same residence hall had significantly more positive attitudes (Bowen & Bourgeois, 2001). Additionally, student athletes from three universities who indicated having contact with gay men and lesbian women reported more positive attitudes as well (Roper & Halloran, 2007).

Recently, there have been a series of studies in which heterosexuals are asked to imagine contact with gay men or lesbian women. Turner, Crisp, and Lambert (2007) randomly assigned heterosexual undergraduate students to either imagine a 30-min conversation with a gay man (imagined contact condition) or imagine a 3-day hiking trip (control condition) and in a subsequent study, instructed undergraduate students to imagine either meeting a gay individual and completing a preferred activity with them or interacting with a stranger (Turner, West, & Christie, 2013). In both studies, participants in the imagined contact condition reported more positive attitudes toward gay individuals than those in the control condition.

Besides the imagined contact studies, there are only a few other experimental studies examining cross-orientation contact and attitudes toward gay men and lesbian women. For example, interacting with a gay or lesbian guest speaker(s), who made himself/herself available for questions regarding "homosexuality" in an undergraduate classroom reduced students' stereotyping (Pagtolun-an & Clair, 1986) and discomfort toward gay men and lesbian women (Lance, 1987). In another experiment (Ellis & Vasseur, 1993), undergraduates read a hypothetical resume of a gay man or lesbian woman or a

resume with no mention of sexual orientation and selected interview questions that were negative, positive, or neutral in terms of information seeking. Participants who had previous contact with gay men or lesbian women choose fewer negative information-seeking interview questions in the experimental compared to control condition. In a different experiment, Grack and Richman (1996) had participants work in small groups where two confederates either reported being heterosexual or "homosexual" before the group solved logic problems. Negative attitudes toward gay men and lesbian women decreased by 17% when the confederates posed as gay men or lesbian women compared with 2% when the confederates posed as heterosexual.

In terms of studies specifically addressing cross-orientation friendships (as compared with examining contact more broadly), they are few in number and are all correlational. Herek (1988) showed that among undergraduate students, the number of reported gay or lesbian friends was negatively correlated with sexual prejudice, and likewise, Herek and Capitanio (1996) found that participants who reported a close friendship with a gay man had the lowest levels of sexual prejudice. Replicating these findings, Hinrichs and Rosenberg (2002) found that having gay, lesbian, or bisexual friends was associated with more positive attitudes among undergraduate students from six separate liberal arts colleges. Similarly, Vonofakou et al. (2007) found that cross-orientation friendships were associated with more positive attitudes toward gay men and lesbian women. Baunach, Burgess, and Muse (2009) found that among undergraduates at one university, cross-orientation friendships were associated with positive attitudes toward gay men or lesbian women (for similar finding in high school, see Heinze & Horn, 2009). Most recently, Castiglione, Licciardello, Rampullo, and Campione (2013) found that cross-orientation friendships were related to lower prejudice toward gay men.

Taken together, there is correlational evidence that cross-orientation contact relates to more positive attitudes toward gay men and lesbian women, but there are only a few correlational studies of cross-orientation friendship in particular. To our knowledge, there are no experimental studies examining simulated or induced cross-orientation friendships.

Disclosure of Sexual Orientation

Although the main focus of the present investigation is to test whether a simulated cross-orientation friendship can reduce sexual prejudice, the present investigation also examined how the disclosure of sexual orientation may impact attitudes toward gay men and lesbian women. Because sexual orientation is concealable, disclosure of sexual orientation is relevant to studies of cross-orientation friendships. It is potentially important to understand when sexual orientation tends to be disclosed in cross-orientation friendships and whether the timing of that disclosure influences attitudes toward gay men and lesbian women.

Disclosure is a hallmark of friendship, promoting trust and liking (Collins & Miller, 1994; Miller, 2002). There is some evidence that heterosexuals who learn directly about a gay or lesbian friend's sexual orientation have significantly more positive attitudes toward gay men and lesbian women than those who acquire such information indirectly (e.g., assumed their friend was gay or lesbian or were told by someone else; Herek & Capitanio,

1996). Moreover, disclosure of sexual orientation was related to increased closeness and trust within cross-orientation friendships between lesbian and bisexual women with heterosexual women (Galupo & St. John, 2001). Although these studies are enlightening, they do not explore the timing of disclosure of sexual orientation and how that may impact feelings and attitudes toward gay men and lesbian women.

To our knowledge, there are no experimental studies examining disclosure in simulated cross-orientation friendships and subsequent attitudes toward gay men and lesbian women. Given the potential importance of disclosure to friendships and the concealability of sexual orientation, the present investigation examined disclosure timing, either at the beginning or toward the end of a closeness generating exercise, as an exploratory variable.

Overview of the Current Investigation

The current investigation sought to test for the first time an experimentally induced cross-orientation friendship. This study is a novel, experimental approach for examining the causal impact that a simulated cross-orientation friendship has on heterosexuals' attitudes toward gay men and lesbian women. More specifically, in this study, college student participants (White heterosexual) completed an experimental-manipulated closeness exercise (the fast friends procedure, Aron et al., 1997) with a confederate (matched to participants' gender). Participants were randomly assigned to undergo the fast friends procedure with a confederate who either did not mention sexual orientation (control condition) or revealed being gay or lesbian at the beginning (reveal-beginning condition) or end of the interaction (reveal-end condition). The fast friends simulation developed by Aron et al. (1997), facilitates a "friendship" between two people in a short period of time (e.g., 45 minutes) using a series of self-disclosure and relationship-building tasks (e.g., sharing details about their hopes and dreams) to induce closeness between people (Kashdan, McKnight, Fincham, & Rose, 2011; Mendoza-Denton & Page-Gould, 2008; Page-Gould et al., 2008; Slatcher, 2010; Wright, Aron, & Tropp, 2002). Past research has found that reciprocal disclosure (like that which occurs during the fast friends procedure) promotes liking (Sprecher, Treger, Wondra, Hilaire, & Walpe, 2013).

As Aron and colleagues (1997) detailed while setting up the fast friends procedure, "one key pattern associated with the development of a close relationship among peers is sustained, escalating, reciprocal and personalistic disclosure" (p. 364). The fast friends procedure mimics the sort of escalating disclosure found as a friendship is developing. This disclosure facilitates closeness and bonding. A few past studies have used fast friends as a way to improve cross-group attitudes (Mendoza-Denton & Page-Gould, 2008; Page-Gould et al., 2008). For example, Page-Gould et al. (2008) used the fast friends procedure with White and Latino undergraduate students and found that participants reported less anxiety and sought out more intergroup interactions (for similar findings, see Mendoza-Denton & Page-Gould, 2008). Likewise, Wright, Aron, McLaughlin-Volpe, and Ropp (1997) successfully used the fast friends procedure to lessen intergroup competition and improve attitudes in an experimental study involving novel groups.

As mentioned above, the fast friends procedure has been used as a way to improve cross-group attitudes, but not cross-orientation

attitudes. Given that gay men and lesbian women continue to be at risk for interpersonal violence, stigmatization, and negative attitudes (e.g., Herek, 2010; Herek, 2011), our simulation did not involve face-to-face interaction, but rather used an online communication program, Skype. The current study did not involve any video or sound and only utilized the messenger feature of Skype such that the participant and confederate typed responses to each other. Online communication of this nature ensured that our confederate would not experience any face-to-face harassment in the experimental conditions, in which sexual orientation was mentioned.

In the present investigation, we made minor modifications to the typical fast-friends simulation. One modification was to conduct the fast friends procedure using an online messaging tool, Skype, instead of an in-person interaction (see Mallen, Day, & Green, 2003, for the use of fast friends in an online context). A confederate typed responses using a script, which allowed for experimental control. Indeed, the use of a confederate or some ostensible other participant has been used in fast friends procedure in studies of other types of intergroup friendships (Kashdan & Roberts, 2004; Kawakami, Phills, Steele, & Dovidio, 2007; Paolini, Harwood, & Rubin, 2010; Pearson, Dovidio, Phills, & Onyeador, 2013; Vorauer, Gagnon, & Sasaki, 2009). Another modification involved reducing the number of questions from the original 36 questions to 15 questions given the time constraints added by typing out responses to each question online versus answering questions verbally in-person.

Our main research question was whether an experimentally induced closeness exercise (the fast friends procedure) in which participants revealed their sexual orientation (relative to a control condition) could improve attitudes toward gay men and lesbian women. To address this question, we examined whether heterosexual undergraduates who "conversed" with an ostensibly gay or lesbian conversation partner (matched to participants' gender) reported improved attitudes (pre- to postexperiment) toward gay men and lesbian women, greater feelings of interpersonal closeness, and exhibited more positive behavior (longer and friendlier responses during the conversation and after participants' revealed their sexual orientation in the experimental conditions).

Additionally, we examined whether the timing of sexual orientation disclosure impacted attitudes toward gay men and lesbian women. This was an exploratory variable given the virtually nonexistent literature on sexual orientation disclosure timing. We manipulated disclosure timing with the use of two experimental conditions: a reveal-beginning condition (in which sexual orientation was disclosed at the start of a conversation) and a reveal-end condition (in which sexual orientation was not revealed until later in the conversation).

Method

Participants

A total of 173 (119 females, mean age = 19.55, $SD = 3.42$) White, heterosexual, and native English speaking undergraduates from a large public university in the Northeastern United States completed both premeasures and the laboratory portion of this study in exchange for course credit in their Psychology classes. Because of the eligibility requirements and the two-session nature

of the procedure involving a laboratory portion with one participant participating at a time, participants were recruited across four semesters. Participants were randomly assigned to one of three conditions: control ($n = 54$), reveal-beginning ($n = 61$), and reveal-end ($n = 58$). The total of 173 does not include three participants who were removed from data analyses for suspicion about the cover story or confederate, one participant who was mistakenly debriefed before completing the measures, one participant who did not complete the premeasures, and one participant in the experimental condition who failed to identify the confederate as gay during a manipulation check in the poststudy measures.

Procedure

Given the lengthy two-session procedure, the available student population, and that some past work indicates racial and ethnic differences in sexual prejudice scores (e.g., Baunach et al., 2009; Whitley, Childs, & Collins, 2011), this experiment only included White undergraduate students. After completing the premeasures (which typically occurred a few weeks before the laboratory portion), participants who fit the study qualifications (White, heterosexual and native English speaking; $n = 592$) received an e-mail message inviting them to participate in an ostensibly separate laboratory study called "Internet Communications." A total of 179 participants scheduled appointments to take part in the laboratory portion (eligible participants sometimes do not sign up because they have already completed their research requirement). On arrival, the participants were told that the study concerned the way people develop and maintain relationships online and that they would have a Skype instant messenger conversation (that did not include video or sound) with another student of the same gender from their university who was located in a separate room within the laboratory. In reality, the 'participant' in the other room was a confederate who typed answers to the questions following a detailed script. Participants could not see or hear the confederate, and likewise the confederate could not see or hear the participants. All communication was through the messenger feature on Skype in which the participant and confederate typed responses to each other. Confederates were research assistants who had been extensively trained over a period of a few weeks for their role in this study. Confederates were trained to use a detailed script for all their replies and did not disclose any personal information to the participants (which was verified when the script for each conversation was reviewed during data analysis).

Participants were told "for this study, you'll be Skyping with another [female/male] student. Please follow the list of questions provided. The other participant will answer the question first. [She/He] is set up in the other room. In the interest of both your time and [her/his] time, please stick to the list of questions we have provided." The questions were 15 "getting-to-know-you" questions (see supplemental material) from the in-person fast friends procedure (Aron et al., 1997), which others researchers have used in an online context (Mallen et al., 2003). Participants were randomly assigned to one of three of conditions; sexual orientation mentioned at the beginning of the conversation (reveal-beginning), toward the end of the conversation (reveal-end), or sexual orientation was not mentioned (control condition). Participants in all three conditions underwent the fast friends procedure. The only difference between the experimental conditions (reveal-beginning

and reveal-end) and the control condition was the disclosure of sexual orientation. The confederate mentioned their sexual orientation to reveal-beginning participants while answering the first question and to reveal-end participants while answering the 13th question. Disclosure of sexual orientation was done following this question: "Given the choice of anyone in the world, whom would you want as a dinner guest?" For our experimental conditions, confederates responded "I'd have dinner with Harvey Milk. He was the first openly gay man to be elected to public office. He was brave to come out in the 70s and run for public office. I'm gay so I admire and respect people who further gay rights." More information on the script can be found in the supplemental materials.

Afterward, the experimenter directed the participant to an online survey, which contained the poststudy dependent measures. A long in-person debriefing took place in which participants met with the confederate (consistent with other research on fast friends, no negative effects were reported).

Measures

Sexual prejudice. Sexual prejudice was measured using the 10-item Attitudes Toward Lesbians and Gay Men scale (ATLG; Herek, 1988). Participants answered 10-items on a 1 (*strongly agree*), 2 (*agree*), 3 (*somewhat agree*), 4 (*neither agree nor disagree*) . . . to 7 (*strongly disagree*) scale. Sample items included "lesbians just can't fit into our society" and "I think male homosexuals are disgusting." Higher scores on the ATLG indicate more positive attitudes toward lesbian women and gay men. Premeasure ATLG scores ($M = 5.85$, $SD = 1.01$), and postmeasure ATLG scores ($M = 6.09$, $SD = .85$) both demonstrated good reliability ($\alpha = .87$ and $\alpha = .85$, respectively). There were no gender differences on the pre and post ATLG scores.

Perceived closeness to conversation partner. The participant's perceived closeness to the confederate was measured using an adapted version of the Inclusion of Other in the Self scale (IOS; Aron, Aron, & Smollan, 1992). Participants rated their closeness to their Skype partner from 1 (*not at all close*) to 7 (*extremely close*), represented visually with seven circles of increasingly overlapping "self" and "partner" circles, with three items: "rate your closeness to the person you Skyped with," "rate your closeness to this person relative to all your other friends," and "rate your closeness to this person relative to friendships in general" (Cronbach's $\alpha = .87$).

Length of responses. We examined the length of the responses immediately following the disclosure of sexual orientation as an initial reaction following disclosure. We also examined the overall length of the entire transcript.

Two independent coders, blind to the condition, coded the entire transcript of each participant's conversation with the confederate on a scale from 1 (*not at all*), 2 (*a little*), 3 (*some*), 4 (*a lot*), to 5 (*completely*) for overall friendliness. Coders also examined the response immediately following the disclosure of sexual orientation in the experimental conditions or the control condition in terms of friendliness. Coding for friendliness involved looking for detailed and engaged responses. Given the high interrater correlations (overall friendliness [$r = .87$] as well as friendliness [$r = .84$] following the designated disclosure question in the experimental conditions), the ratings of the two coders were averaged for

data analyses. To ensure that coders were blind to the condition, the transcript for each participant was transferred to an excel document, labeled with an identifying number and any reference to the condition was removed. Coders saw only the response of participants. The disclosure was made by the confederate, and all the confederate's responses in the transcript were removed for the purposes of coding. To ensure that coders could not tell the condition, we rearranged the order of responses in the excel document so that regardless of condition, the questions and participants' responses were in the same order. For example, responses to the question in which the confederate either revealed being a gay man or a lesbian women (both experimental conditions) or control condition (in which the confederate did not mention sexual orientation) were placed in the first row of the excel spreadsheet so coders could not tell which condition participants were in.

Results

Analyses of variance (ANOVAs) and analyses of covariance (ANCOVAs, used when premeasures were available on the dependent measure) were used to examine potential differences between our three conditions. Planned contrasts were then conducted to examine differences between the conditions. Our key planned contrast was whether disclosure of sexual orientation (either experimental condition) was significantly different from no disclosure of sexual orientation (control condition). Specifically, we hypothesized that the fast friends procedure in which sexual orientation was revealed (either experimental condition) versus when it was not (control condition) would result in more positive attitudes toward gay men and lesbian women (as measured by the ATLG), greater perceived closeness (as measured by IOS) and longer and more friendly responses (as indicated by their coded responses). Additionally, we conducted planned contrasts examining potential differences between our two experimental conditions to explore the impact that sexual orientation disclosure timing could have on the aforementioned dependent measures.

An ANCOVA with all three conditions revealed a significant effect of condition on attitudes toward lesbian women and gay men (ATLG) after controlling for the effect of participant's premeasure ATLG scores, $F(2, 169) = 3.37, p < .05$. Planned contrasts revealed that participants in either experimental condition (reveal-beginning or reveal-end), $p = .026$, 95% CI $[-.36, -.02]$ reported significantly higher ATLG scores after completing the fast friends procedure compared to being in the control condition. There were no significant differences in ATLG scores between the two experimental conditions: reveal-beginning and reveal-end.

Additionally, we explored participants' feelings of closeness with their Skype partner (the confederate) depending on condition. An ANOVA on feelings of closeness toward the participant's Skype partner revealed an effect of condition that approached significance $F(2, 170) = 2.70, p = .07$. Planned contrasts revealed that participants in reveal-beginning condition ($M = 3.23, SD = 1.11$) and reveal-end ($M = 3.07, SD = 1.14$) reported feeling significantly closer to their Skype partner compared to the control condition ($M = 2.75, SD = 1.12$), $t(170) = 2.18, p < .05, d = .36$. A planned contrast showed no significant differences between the two experimental conditions: reveal-beginning and reveal-end.

We examined the length of the responses for the answer immediately following the disclosure of sexual orientation, hypothesizing that a longer response (more words) in the experimental conditions as compared with the control condition would indicate greater social support. As expected, an ANOVA revealed that there was a significant effect of condition on the length of response immediately following disclosure of sexual orientation, $F(2, 169) = 5.29, p < .001$. Planned contrasts revealed a significant difference between the experimental conditions: reveal-beginning condition ($M = 41.57, SD = 19.96$) and reveal-end condition ($M = 42.28, SD = 22.18$) compared with the control condition ($M = 31.93, SD = 12.13$), $t(158.59) = 3.92, p < .001, d = .64$. There were no significant differences between the two experimental conditions: reveal-beginning and reveal-end.

We also examined the overall length of the entire transcript examining whether longer responses overall would be found in the experimental conditions compared to the control condition. An ANOVA revealed no significant differences between the conditions with all participants (regardless of condition) writing similarly long overall responses, 847.29 ($SD = 313.71$) for the reveal-beginning, 798.46 ($SD = 313.89$) for the reveal-end, and 798.48 ($SD = 291.81$) for the control condition, $F(2, 169) = .498, p > .05$.

We then explored coders' ratings of the friendliness for participants' responses to the answer immediately following the question in which sexual orientation was disclosed. To ensure coders were blind to the condition, any responses from participants that included an explicit reference to sexual orientation (e.g., "oh that's cool, my brother is gay too") were removed from the analysis. This led to the removal of 6 participants for this analysis. An ANOVA revealed an overall effect of condition on friendliness, $F(2, 163) = 4.53, p < .05$. Planned contrasts revealed that participants in the reveal-beginning condition ($M = 3.58, SD = .88$) and the reveal-end condition ($M = 3.68, SD = .90$) provided significantly friendlier responses immediately following the disclosure of sexual orientation than participants in the control condition ($M = 3.21, SD = .62$), $t(121.49) = 3.36, p < .001, d = .55$. There were no significant differences between the two experimental conditions: reveal-beginning and reveal-end.

Finally, we explored overall friendliness of the entire conversation. An ANOVA revealed no significant differences between the conditions with all participants (regardless of condition) displaying similar levels of friendliness, 3.75 ($SD = .90$) for the reveal-beginning, 3.60 ($SD = .92$) for the reveal-end, and 3.44 ($SD = .83$) for the control condition, $F(2, 170) = 2.60, p > .05$.

Discussion

Unfortunately, gay men and lesbian women continue to be the targets of prejudice and discrimination throughout the world. Building on a relatively small literature of correlational studies showing that sexual prejudice is lower among those reporting cross-orientation friendships (e.g., Herek & Capitano, 1996), the current investigation sought to examine whether a simulated cross-orientation friendship could reduce sexual prejudice.

Results from the current investigation demonstrate for the first time that inducing a conversation involving key features of friendship (exchanging and disclosing personal information) via the fast friends procedure between heterosexual undergraduates and an

ostensibly gay or lesbian conversation partner improves attitudes toward gay men and lesbian women, fosters positive feelings of interpersonal closeness, as well as longer responses and displays of friendliness immediately following the disclosure of sexual orientation. The inclusion of two experimental conditions—in which sexual orientation was revealed early or later in the fast friends procedure—allowed for an examination of whether timing of the sexual orientation disclosure was a relevant variable. Revealing sexual orientation both early and later in the conversation yielded positive change in sexual prejudice levels relative to the control condition. There were no significant differences between the two experimental conditions.

From a broader perspective, this finding contributes to the relatively nonexistent literature on experimental studies of cross-orientation contact (see Ellis & Vasseur, 1993; Grack & Richman, 1996; Lance, 1987; Pagtolun-an & Clair, 1986 for exceptions). To our knowledge, no experimental study has examined the potential prejudice reducing effects of a simulated cross-orientation friendship. More specifically, these findings support existing correlational research regarding the importance of cross-orientation friendships in improving attitudes toward gay men and lesbian women (e.g., Herek & Capitanio, 1996), a finding which has not been demonstrated in an experimental setting. Improving heterosexuals' attitudes toward gay men and lesbian women in a short (approximately 30 minute) interaction that involved key components of friendship (e.g., self-disclosure) with an ostensibly gay man or lesbian woman is an encouraging finding for the prejudice reduction literature. Our findings suggest that an experimental-manipulated closeness exercise (the fast friends procedure) can be utilized to improve attitudes toward gay men and lesbian women.

Limitations and Future Directions

There are a few limitations that should be considered when interpreting the results of the current investigation. Participants reported relatively low levels of sexual prejudice in the premeasure, which is not ideal for a study intended to improve attitudes. Whether the findings from the current studies are generalizable to other universities, countries, racial/ethnic groups, or to community samples remains unclear.

This study builds on the contact hypothesis, which despite its well-established nature (e.g., Pettigrew & Tropp, 2006) is not without criticism (Dixon, Durrheim, & Tredoux, 2005). Dixon and colleagues (2005) note that the contact hypothesis often only focuses on personal shifts in prejudice, which could be addressed by incorporating more diverse measurement such as political consciousness and awareness of institutional and social privilege. Future studies would then benefit from examining whether a simulated cross-orientation friendship increases awareness of heterosexual privilege or support for LGBT social and political issues. A better understanding of how cross-group friendships impact support for social and political issues could be useful for understanding the trajectory of the LGBT rights movement and notable victories like the Supreme Court legalization of same-sex marriage.

Despite these limitations, our study had a number of notable strengths. To our knowledge, this study represents the first time that a simulated friendship has been induced in a laboratory setting to determine whether interacting with an ostensibly gay or lesbian

individual results in more positive attitudes toward gay men and lesbian women. Another strength is the inclusion of two experimental conditions, which allowed us to examine whether timing of disclosure impact attitudes toward gay men and lesbian women. The inclusion of premeasures acquired from participants in a separate sessions weeks before the experiment was yet another strength because it allowed for the examination of not just differences between participants in different conditions of the experiment, but also a change in attitudes within participants over time. Further strengths were the inclusion of well-established attitudinal measures (ATLG and IOS) and behavioral measures (length of responses and coded responses to conversation partner). The inclusion of participants from four semesters is another strength because our results do not rely on a single cohort of students.

Results from the present investigation suggest several fruitful avenues for future research. It is important for future research in this area to examine the generalizability of these findings to other universities, in a community sample and among a diverse racial/ethnic sample of participants. It would also be worthwhile to include additional behavioral measures and a delayed follow-up. A less blatant measure of sexual prejudice (e.g., Modern Homonegativity Scale) may be a meaningful extension of the current research. It would be helpful to understand whether modern forms of sexual prejudice (e.g., believing that sexual minorities are seeking special privileges compared with heterosexuals) can be reduced via a simulated cross-orientation friendship. Likewise, it would be worthwhile in future studies to measure and examine the potential role of social desirability or impression management concerns of study participants.

Future work could follow-up this study examining attitudes toward bisexuals. For the current study, we focus only on attitudes toward gay men and lesbian women as recent research suggests that binegativity (the societal stigmatization of bisexuals) is highly prevalent and distinct from homonegativity (the societal stigmatization of lesbian women/gay men) (Balsam & Mohr, 2007; Brewster & Moradi, 2010; Mohr & Rochlen, 1999). It would be worthwhile for future studies to examine whether attitudes toward bisexuals can also be improved via an induced cross-orientation friendship.

Future studies can also address why participants in the experimental conditions in the current study reported greater levels of closeness to the confederate than participants in the control condition. It is possible that sexual orientation disclosure impacted trust. Past work suggests that cross-orientation friendships experience an increase in closeness and trust following the disclosure of sexual orientation (Galupo & St. John, 2001). Trust resulting from disclosure may breed perceived responsiveness and facilitate friendship building in both simulated and existing cross-orientation relationships. An increase in trust could potentially explain why we saw longer and friendlier responses from participants in the experimental conditions compared with the control condition. Examining trust after disclosing sexual orientation is an interesting and worthwhile area of future study.

The benefits of disclosure can be found among heterosexuals (e.g., improved attitudes) and among sexual minorities. Among sexual minorities, having cross-orientation friendships was associated with lower levels of internalized sexual stigma (Baiocco et al., 2012). Similarly, disclosing one's sexual orientation can have positive benefits such as increased self-esteem and less anxiety

(Jordan & Deluty, 1998), lower levels of internalized sexual stigma (Baiocco et al., 2012), and the promotion of higher levels of intimacy (Reis & Shaver, 1988). Among heterosexuals, those who were disclosed to showed improved positive attitudes toward bisexual and lesbian persons (Oswald, 2000). Future work could examine potential benefits to both the heterosexual partner (as we did in this study) as well as the gay or lesbian partner (e.g., reduced internalized sexual stigma, increased self-esteem). A better understanding of how these variables impact attitudes, closeness, and friendliness within both existing and simulated friendships could be used to improve mental and physical health outcomes among gay men and lesbian women.

Another fruitful direction could be to adapt the current procedure for fostering friendships for use between groups that have strained or negative relations. Past research (Mendoza-Denton & Page-Gould, 2008; Page-Gould et al., 2008) has tended to use the fast friends procedure to reduce racial prejudice and to do so during face-to-face interactions (e.g., Mendoza-Denton & Page-Gould, 2008, Page-Gould et al., 2008; see Mallen et al., 2003, for an exception). The fast friends online communication procedure used in the present investigation could be adapted to open new avenues for reducing prejudice toward other stigmas (e.g., age or weight) that could be revealed through an online interaction. Our online fast friends procedure may be useful as a way to reduce prejudice toward other concealable and stigmatized identities such as bisexuality and transgender. Additionally, bisexuality and transgender research are historically underrepresented in the prejudice literature, though of extreme importance given high levels of bias and negative attitudes toward both groups.

Additionally, more research is needed to explore the potential importance of disclosure timing in cross-orientation friendships. Results from the present investigation suggest that disclosure of sexual orientation had positive effects on attitudes toward gay men and lesbian women and also generated feelings of closeness, but we did not find uncover differences based on timing of disclosure. It is possible that the fast friends procedure employed here was too short (e.g., only an average 30-minute difference in when the reveal-beginning vs. reveal-end condition mentioned sexual orientation during the fast friends procedure) for any differences related to disclosure timing to emerge. Unfortunately, there are virtually no experimental studies of disclosure timing to gather an understanding of our findings. Thus, more research is needed to explore whether timing of sexual orientation disclosure plays a role in cross-orientation friendships and attitudes toward gay men and lesbian women.

Conclusions

Findings from the current study show that a simulated cross-orientation friendship between a White, heterosexual undergraduate student and an ostensibly gay or lesbian individual resulted in more positive attitudes toward gay men and lesbian women, greater feelings of interpersonal closeness, and longer and more friendly responses following the disclosure of sexual orientation. We look forward to more research exploring the role that cross-orientation friendships play in attitudes, closeness, and behavioral responses toward gay men and lesbian women.

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